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INDUSTRIAL ART

SPANISH PORCELAIN.

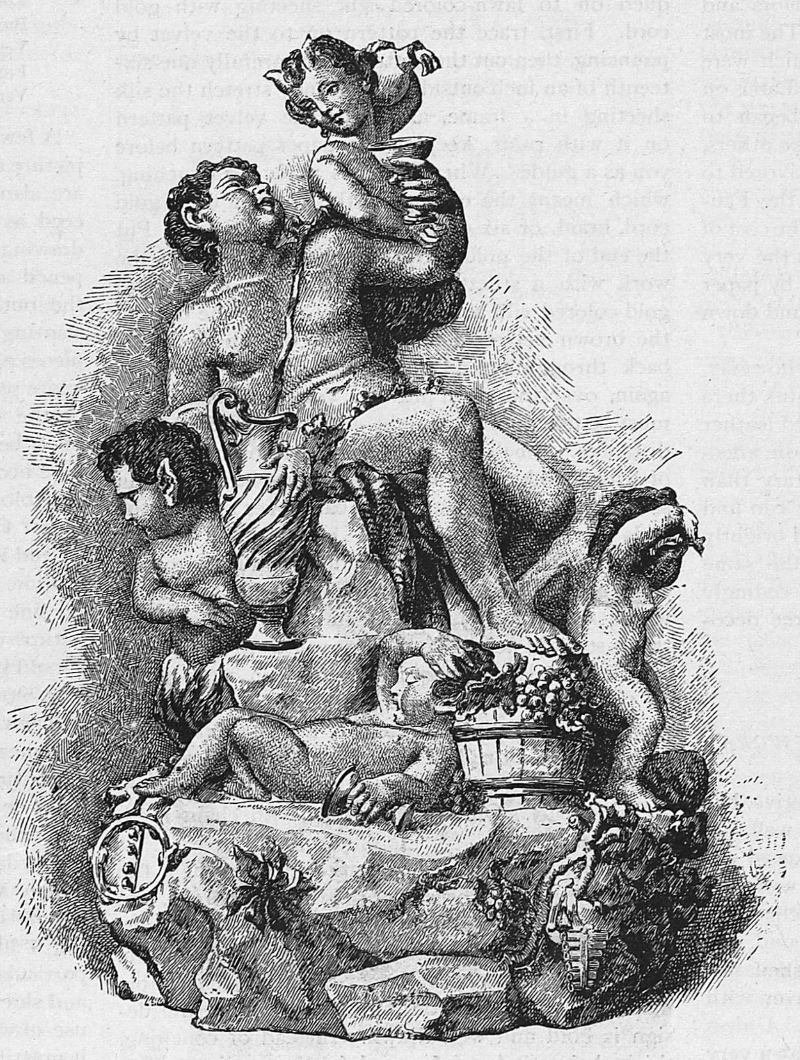
AMONG the manufactories which were established in Europe as soon as the discovery of kaolin had rendered the manufacture of hard paste possible, none produced finer pieces than that founded at Capo di Monte, on the Bay of Naples, by Charles III., in the year 1736. The first productions of this factory were confined to reproductions of Chinese and Japanese pieces, but very soon the influence of the Dresden style of manufacture was felt, probably through the agency of a truant craftsman, who had escaped from the fortified factory of Meissen, in which the secret of porcelain manufacture was first so jealously kept. He no doubt introduced into the decoration the figures borrowed from the heathen mythology, and corals and sea-plants taken from the Mediterranean. The first manager was Louis Schepers, of Belgium, but on account of his old age, his son, Gaétan and the painter Jean Cassela became his assistants. For twenty-four years the factory enjoyed a European reputation, and its productions were valued at nearly the same rate as those of the royal factory of Saxony. In 1759, when Charles III. became King of Spain, he transported to Madrid fifty-three artisans from Capo di Monte, with all the necessary articles to start a factory. With the assisting workmen, who amounted to two hundred and fifty souls, it required five vessels to carry the party from Italy to Spain.

The spot selected for the erection of the factory—the plans of which were approved by the king on the 28th of December—was in the gardens of the Buen-Retiro, near the hermitage of San Antonio, and the astronomical observatory. Singular as it may seem to us, the architect, Charles Antoine de Borbon, was a colored man who, having been made a prisoner by the celebrated Barcelo, was instructed and developed great talent under the auspices of the queen dowager. The structure cost over eleven millions of reals, and an allowance of two millions a year was made for its maintenance. At first, under the management of Gaétan Schepers, many mishaps occurred, and few pieces were brought to perfection. Yet we may mention among the important pieces the porcelain covering of a cabinet known as " la China," now in the palace of Aranjuez. It was designed and modelled by Joseph Gricci, sculptor to King Charles III., and in 1766 director of the Academy of San-Fernando.

For the first thirty years of its existence the pieces turned out of this manufactory were used without exception as presents for foreign courts or kept by the different members of the royal family. At the death of Charles III. the sale of them was not allowed, and it was not until 1789, thirty years after the opening of the workshops, that the goods were sold to the public. Admission to the factory was always denied to visitors, and many travellers who visited Spain at about that period, and have left interesting records of their journey, mention the fact and complain about it.

The production of the Buen-Retiro factory consists in pieces in hard and soft paste, biscuit white or colored, gilded and glazed according to the style of the decoration. Much money was expended in experiments with clays and earth found in Spain.

It has been generally believed that this factory had to imitate the Dresden style, but such is not the case. The body of the ware is of a different color, and the elegance and fineness of both modelling and painting point towards an Italian rather than a German taste. During the last years of the past century and the early part of the present one, the Wedgwood jaspers with their cameo-like decoration were imitated with great success. In 1803 the forms and models of Sèvres began to be imitated; this was owing to the appointment as manager of Barthelemy Sureda, who had received his art education in Paris. In 1808 the advent of the French put an end to the working of the factory. The building on the outskirts of Madrid had too much strategical importance to be used longer for purposes of artistic manufacture. An attempt to revive the porcelain making under King Joseph died out entirely in 1812, and after having been occupied at different times by the French, and then by the English, the building was blown up on the 30th of October in that year by General Hill.



GROUP IN BUEN-RETIRO PORCELAIN.

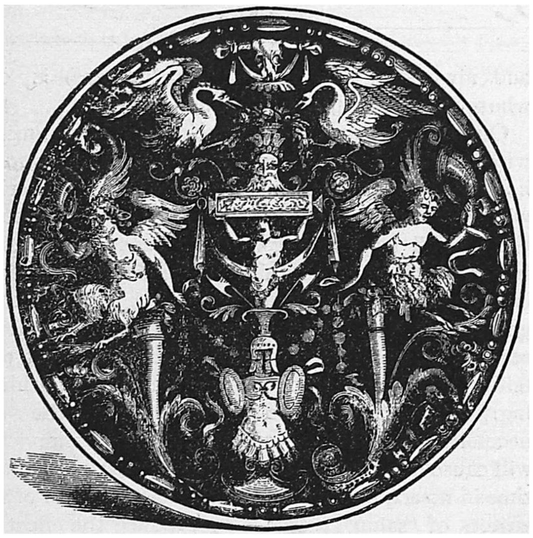
The group shown in our illustration is a good specimen of the Buen-Retiro work. The lily or fleur-de-lys, of different sizes, shapes and colors, was always the stamp of the factory, but the monogram of Charles III. (two C's back to back), or the initials of the artists or the word Madrid abridged, with or without the crown, are often found on the backs of the pieces. The most celebrated artists were Carlos Fumo, Salvador Nofri, Felipe Gricci and Pedro Antonio Giorgi.

PUEBLO POTTERY.

THERE still remain in the valley of the Rio Grande del Norte nineteen villages, founded long before the discovery of America, and preserving the old arts practised there centuries ago. The ceramic art is one of these, and a recent correspondent of The Tribune gives some interesting facts concerning the discoveries lately made by a party of Smithsonian Institution explorers in that region. It seems that the pottery now manufactured in the town of Zuñi is almost identical with the very ancient ware found among the stone ruins which abound throughout that section. Attention has been called to this ware recently by Prof. Hayden, in his last annual report of the United States Geological Survey of the Territories, in which are figured several fine water-vessels in the forms of owls, hawks, ducks, and domesticated fowls. The collection made by the Smithsonian party includes many animal forms and hundreds of specimens of almost every conceivable shape, scarcely any two of them being similar. It is, without exception, the finest and most complete collection of modern Pueblo ware in existence. The methods of manufacturing this pottery are exceedingly interesting. The clay is procured from the neighboring mesas, and the vessels are moulded entirely by hand. When an unusually fine piece is being made, the clay is wet and smoothed by the lips of the potter.

In the Pueblo of Laguna pottery is made in a similar manner. A private collection, just received in Philadelphia from there, contains a number of vessels in imitation of ducks and hens. Such objects, while ornamental, are designed for use also, and are employed in carrying water on journeys. A common ornament on this ware is a painted representation of the elk or deer, in which a passage invariably extends from the mouth to the heart, which latter is of triangular form. The tenahas, or earthen basins, are used as receptacles for meal, corn, water, or other substances which constitute the food of the natives. One very old vessel is covered with representations of snakes, a rare figure in the ornamentation of Pueblo ware, since the priests or medicine-men no longer permit the people to employ the sun or serpent symbols, but monopolize them in their incantations and stately ceremonies. Tenahas are made of all sizes, from an inch in diameter to those that will hold from twenty to thirty gallons. Each large vessel has a concave bottom, like a champagne-bottle, for steadying it on the head in carrying water from the well.

The clay used in the manufacture of the Laguna pottery is of a dark slate color and exceedingly compact, oftentimes approaching soft rock in texture. This is taken from seams or veins in the mesa walls. The Indians soak this clay in water for two or three days, when it becomes perfectly plastic. It is then kneaded with the feet of the workmen on a large flat stone, and all the hard lumps are taken out carefully. After the vessels are moulded into form they are left to dry, and then covered with a groundwork of white paint. Over this there are painted fanciful devices in red, orange, and black. The lustre of the ware is imparted by polishing the paint, before baking, with an exceedingly smooth stone like an ordinary seashore pebble. The brown or black pigment is made from a black stone somewhat resembling hematite. This is ground fine, mixed with water and violently agitated for some time. It is then poured from one vessel to another to remove all grit, and is applied to the surface of the vessel to be ornamented, as common paint, with a stick. This paint alone would rub off, but to prevent this it is mixed with the residue of two plants or weeds boiled together for a long time until it becomes of the required consistency, after which it is allowed to cool; it then becomes perfectly hard. The clay employed for the red color is of a yellowish tint, but on being baked changes to a brilliant red. The process of burning or baking consists in first placing the vessels on stones, around which is packed a quantity of dry barnyard manure, which is considered the best fuel. The vessel is covered completely with this substance, so as to exclude the air, and a very hot fire of two or three hours' duration is produced. During the process of burning the vessels are closely watched, and no portion of them is permitted to become exposed to the atmosphere. The pottery of Laguna, and in fact of most of the other Pueblo villages, is almost entirely made by the women, who expend much of their leisure time in moulding and decorating the ware.



MAJOLICA CUP. DECORATED WITH RAPHAEL ARABESQUES.

LIMOGES ENAMELS.

THE art of enamelling, that is, of covering metallic surfaces with melted glass to which it is made to adhere by heat, may be considered of great antiquity. It is a generally accepted theory that this art first originated in a desire of artisans to produce the ornamental effect of precious stones without incurring the expense of using the real materials, which in ancient times, especially on pieces of large dimensions, would have been enormous. The Egyptians used colored pastes, the basis of which was glass and colored enamels, in works of the minutest dimensions, representing, for instance, the petals of small flowers, as on a necklace which was once worn by the Empress Eugénie, but which she discarded as soon as she knew it had been worn for centuries by a mummy, and which is now in the British Museum.

Philostratus informs us that the barbarians who lived near the ocean had a way of ornamenting their horse trappings with vitrified colors at the time of the Roman dominion in Gaul and Britain, and in Frank tombs a great deal of jewelry set with pieces of colored glass or pastes is found.

In Japan, where the art of enamelling flourished at an early period, it is designated by the name "strippo," which translated signifies the seven precious metals.

Enamels are divided into two classes—thin or surface enamels, generally called "Limoges enamels," and thick or opaque enamels, generally termed "Cloisonné."

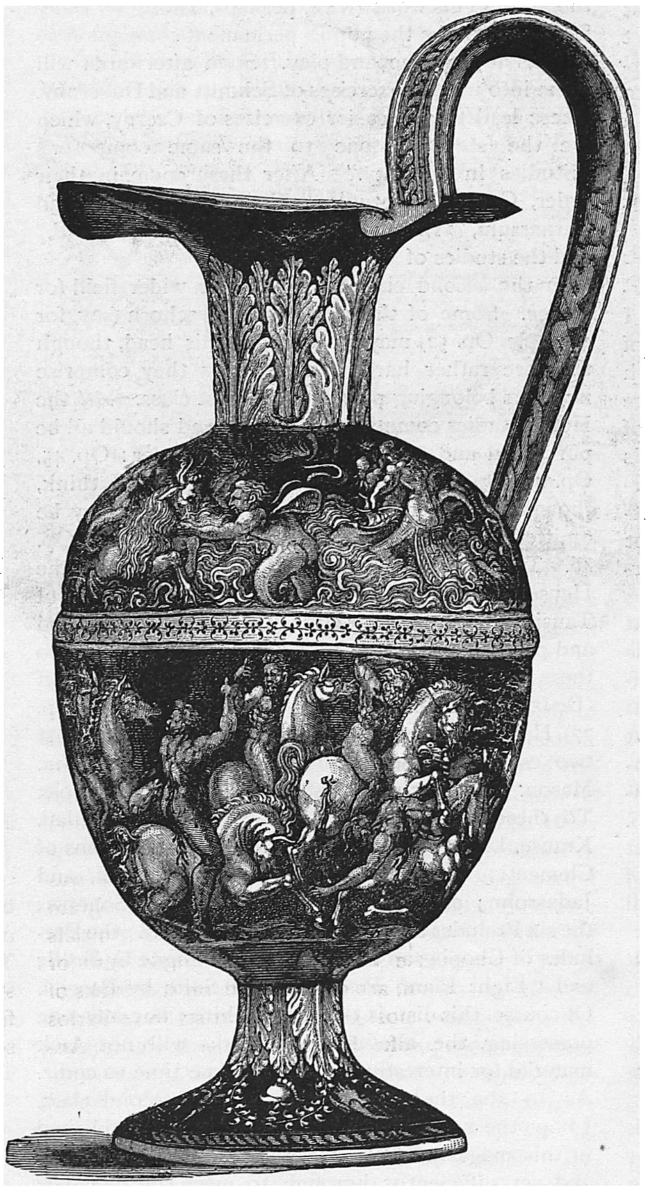
We give the illustration of a piece of Italian majolica, which, decorated with what is termed "Raphaël arabesques," may be considered as a prototype of the style the enamellers of Limoges imitated, more especially when under the influence of the Italian school of Fontainebleau.

Before entering, however, into the peculiarities of the different styles of work which succeeded each other in the history of Limoges enamels, it is indispensable to explain the process of manufacture.

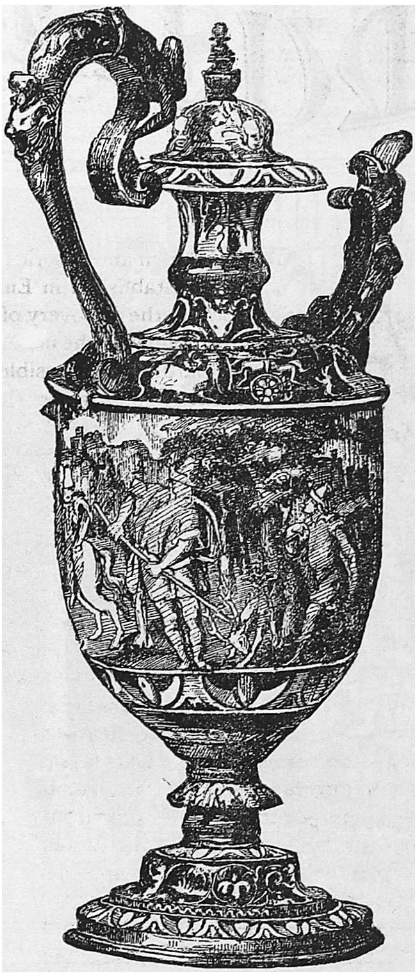
The piece to be enamelled is first of all made in thin copper, the workman hammering or spinning it into shape out of metal as pure as possible, for enamel will adhere only to pure metals. Gold or platinum may be also used for small pieces, but copper is more usually employed. Silver, on account of its expansion, is a difficult metal to use for this style of work. If the enamelled decoration is to be applied on a flat surface, the piece of metal must be hammered in the centre to make it slightly concave; this is done to prevent it from warping when exposed to the heat of the muffle. For the groundwork a dark brown or black enamel, often slightly translucent. is used, and after the piece has been thoroughly "pickled" and washed, to remove all dust or grease from its surface, the enamel, which is simply dark glass reduced to a very fine powder, is evenly spread upon it. Holding it with a pair of long iron tongs, the enameller places it on a small terra-cotta stand in the centre of the "muffle," which is a hemispherical oven made of earth, placed in the centre of a large furnace.

At the end of a few minutes, as soon as the workman sees that the glass or enamel is beginning to melt and "fuse" over the piece, which he can do through the door of the muffle, which is easely movable, he brings out his piece, but leaves it to cool gradually on a shelf outside the door of the furnace, for too sudden a change of temperature would cause the enamel to split and scale off. Before "firing" his piece or passing it through the muffle, the workman must have taken the precaution of covering the back or the inside of it with a coating of enamel of inferior quality to prevent it from burning. This enamel is mixed with gum or mucilage to keep it in place until it fuses and adheres to the metal.

The next operation, now that the piece is covered with a thin, smooth, and even coating of enamel, is to outline on it the figures or ornaments which are to form the decoration; this is done with a brush dipped in white enamel, reduced to a very fine powder, and mixed with oil or turpentine. The whole ornament is then painted over with white enamel, and "fired." The white enamel on melting mixes with the dark color below, and when the piece is cold again we find all the outlines filled up with an even coat of dark gray. White is now used again, but reserving in the dark gray the parts where the strongest shadows are to be cast. This time on coming out of the muffle the whites of the second fire being thicker are more intense; the operation is repeated as often as necessary, working up from the shadows to the high-lights in a manner which, though used for other styles of work by masters of the Italian school, is the reverse of that generally employed in shading.



EWER IN LIMOGES ENAMEL. BY LEONARD LIMOSIN.



EWER IN LIMOGES ENAMEL. BY PIERRE REYMOND.

This gives great transparency and depth to the shadows, though it increases the labor and the risk of spoiling the pieces by passing them so frequently through the fire. In modern times gray enamel tints are used for the shadows, but the effect is quite different from that obtained by the old method of the Limoges factories.

Gilding and tints of color are applied in translucent enamels after the shading or modelling has been done in white. One fire is sufficient to glaze them. Another advantage of the method of superposing the layers of white is that being slightly thicker on the high-lights it indicates the modelling in soft touches which adds immensely to the artistic effect.

Sometimes pieces of thin metal foil are introduced between the enamel and the piece. These are painted over with transparent enamel, and are used to imitate brilliant stuffs such as brocades or satins, and the pieces of jewelry that are worn by the personages that are represented. This particular style is termed "email sur paillon," or "enamel on stencil."

In work of the best period made at Limoges but little color was used, the ornament being nearly always in chiaroscuro; sometimes very pale flesh tints are used. The metal is thin, and the plates more convex than at later periods.

Leonard Limosin and Pierre Reymond (of whose work we give illustrations) Jean Court, called Vigier, Jean, Pierre and Martial Courtois, are the most celebrated names of that brilliant period which lasted from 1530 to 1580.

Later a minuteness of detail and excessive use of color and stencil detracted from the masterly character of the work. In modern times the art was carried on in Paris to a very limited extent until a workman, Paul Soyer, undertook to reproduce some of the pieces in the Louvre Museum for the South Kensington collection. This gave a new impulse to the manufacture, which was well represented at the Vienna, Paris, and Philadelphia Exhibitions, and is still much in vogue for cabinet pieces or the decoration of jewelry.

FRÉDÉRIC VORS.